

DOCUMENT RESUME

ED 068 225

RC 006 500

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TITLE Navajo Reading Study. Progress Report No. 4, December 1969.
INSTITUTION New Mexico Univ., Albuquerque.
SPONS AGENCY Bureau of Indian Affairs (Dept. of Interior), Albuquerque, N. Mex.
PUB DATE Dec 69
NOTE 26p.
EDRS PRICE MF-\$0.65 HC-\$3.29
DESCRIPTORS Bilingual Education; *Conference Reports; *Consultants; Language Development; Material Development; *Navaho; *Reading Research; *Research Methodology

ABSTRACT

A summary of the discussions of the Navajo Reading Study Conference, held on December 4-5, 1969, in Albuquerque, New Mexico, was presented in this report. A group of consultants met to discuss the collection of data and its analysis for a study on Navajo reading materials and the language of 6-year-old Navajo children. The consultants included Mr. Kenneth Begishe, Shonto, Northwestern University; Professor Garland Bills, The University of New Mexico; Professor Kenneth Hale, Massachusetts Institute of Technology; Mr. William Morgan, Sr., Navajo Community College; Mr. Paul Platero, Navajo Community College; Professor Bruce Rigsby, The University of New Mexico; Professor Oswald Werner, Northwestern University; Mr. Robert Young, Bureau of Indian Affairs; and Mr. Bernard Spolsky, Director of Navajo Reading Project. The consultants pointed out the inadequacies of a freely collected sample, the probable need for careful eliciting of appropriate words and forms, and the strategies to be followed in further developments of this study. A related document is ED 059 810. (NQ)

ED 068225

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20540

NAVAJO READING STUDY
The University of New Mexico

Director: Bernard Spolsky

PROGRESS REPORT No. 4

December 1969

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This report summarizes activities of the study during the first six months of its operation, gives details of two meetings with consultants, and outlines plans for the next six months.

I. Staff. Paul and Penny Murphy began work as Research Assistants in July; Agnes Holm joined them in October. Wayne Holm, a fellow in the EPDA Bilingual Education Fellowship Program at the University of New Mexico has worked closely with the project since the beginning of the semester in September. Irene Silentman, a Junior in the Department of Elementary Education, has worked part-time on work-study. These assistants will continue in the second semester. In addition, Babette Holliday, a Navajo aide, trained by Professor Oswald Werner (Northwestern University) in tape, will be added to work full-time. Part-time assistants will be hired to help with interviewing, language analysis, and computer operation.

II. Material collection and analysis. Agnes Holm and Penny Murphy have been working on the identification, collection, and analysis of Navajo reading materials. The first result of this activity has been the printing of Progress No. 3, Analytical Bibliography of Navajo Reading Materials. Distribution of this report will hopefully permit us to identify more materials that should be found. One particularly urgent problem is to find a full set (if possible) of the Navajo language newspaper published in the 40's and early 50's. This newspaper will be a source for considerable amounts of reading material of the sort that might be used by teachers and that might well be adapted

for school reading material. We plan to get a complete set on microfilm. We will continue to add items to the bibliography and to make corrections; it is our plan to bring out a corrected version of the bibliography in May or June.

III. Survey of language of six-year-old Navajo Children.

In order to provide some data on the present status of Navajo language maintenance, we are conducting a survey of the language spoken by six-year-old Navajos in schools on or near the Reservation. A simple form has been prepared asking teachers to evaluate their children's knowledge of English and of Navajo at the beginning of the school year. The Navajo Area Office (BIA) distributed this form to all area schools, and has collected the questionnaires and returned them to us for analysis. Similarly, the Gallup-McKinley County Public Schools have had the form filled out in its schools. We are hoping also to collect data from the public school systems in Kayenta, Chinle, Tuba City, Kirtland (Central Administration), Ganado and Window Rock. The data will be analyzed in January and a report prepared hopefully in February. This survey will provide a useful baseline for future studies of the question of Navajo language maintenance.

IV. Analysis of the language of six-year-old Navajos. Professor Richard Venezky, our first consultant, pointed out to us the need for more knowledge of the speech of six-year-old Navajo children before we consider the preparation of materials.

This consultation was summarized in Progress Report No. 1, and Progress Report No. 2 presented a plan for the collection and analysis of language material. In order to find the most effective way of doing this, we have consulted a number of experts on the Navajo language. On November 7, 1969 members of the staff of the Study traveled to Evanston to consult there with Professor Oswald Werner of Northwestern University. Then, on Wednesday, December 3 and Thursday, December 4, 1969 we called together a group of experts to discuss the collection of data and its analysis. The consultants present were

Mr. Kenneth Begishe, Shonto; Northwestern University
Professor Garland Bills, The University of New Mexico
Professor Kenneth Hale, Massachusetts Institute of Technology
Mr. William Morgan, Sr., Navajo Community College
Mr. Paul Platero, Navajo Community College
Professor Bruce Rigsby, The University of New Mexico
Professor Oswald Werner, Northwestern University
Mr. Robert Young, Albuquerque Area Office, Bureau of Indian Affairs

A summary of the discussions at that meeting are included in this report as Appendix I. The most important contribution of the consultants was to point out the inadequacies of a freely collected sample. They stressed the probable need for careful eliciting of appropriate words and forms. Generally, they proposed a model calling for 1) data collection, 2) analysis of data, and 3) further collection of data where the analysis would require it, we will attempt to put their plan into effect. The consultants had a great number of valuable suggestions to make not just about the language sample but about the strategies to be followed in further developments of the project.

In order to start on the collection of data, Wayne Holm traveled to Rock Point and discussed the possibilities of taping there. At the same time, instructors in the University's Kindergarten in Manzanita Center are experimenting with a radio microphone that can be used for collection of a child's free speech. Penny Murphy and Agnes Holm have visited Valle Vista School in Albuquerque, which has a number of Navajo children from the Bordertown Dormitory and from Canoncito to look for young Navajo-speaking children. Work is starting on the implementation of a computer concordance program: other computer analysis will be planned.

V. Analysis of Reading Teaching Experiences. As a start on the analysis of experience of other educators teaching initial reading to Navajo children, a meeting is planned for the end of January to which teachers and aides from Rough Rock Demonstration School, Rock Point School, and Navajo Community College.

APPENDIX. Notes on a consultants' meeting.

Proceedings of
the Navajo Reading Study Conference on the

LANGUAGE SAMPLE

held at
The Holiday Inn (Midtown)

Albuquerque, New Mexico

December 4 and 5, 1969

STATEMENT OF PURPOSE

The following pages represent an attempt to provide a reasonably faithful account of the proceedings of the Navajo Reading Study Conference held at the Holiday Inn (Midtown) in Albuquerque on December 4 and 5, 1969.

Those who question the validity of the transformationalists' theory of a distinction between competence and performance might well listen to the tapes of that conference. While all participants are without question not only competent in their profession but also competent in English, they would probably all have preferred to have edited their own performances before they appeared in print. Unfortunately, this would simply be too much work -- for everybody.

Therefore, I hope you will bear with my editing. At least the main themes discussed are now down in some written form. I have tried to leave as many idioms intact as possible and record at least the spirit of the discussions where I felt a written record would have been hopelessly lengthy in order to get down all the details of a live encounter.

Needless to say, if you don't recognize your style -- or worse, if furthermore you don't like what is reputed to be your style -- please don't be too upset. It's probably my style instead.

Paul Murphy

INTRODUCTORY REMARKS

Bernard Spolsky:

Let me give you, very briefly, the general background of the Reading Study. The original initiative started off something like this: it was suggested by a group of people pulled together by the Center for Applied Linguistics a few years back to talk about English as a second language for Indians -- generally -- that it would be interesting to find out more about the effects of teaching people to read in their own language first. (The sort of thing that Nancy Modiano had done -- and there have been two or three other studies.) And finally the B.I.A. decided that it would be a good idea to do something like that with Navajo children. The original approach, I think, was something like this: let us take two controlled classes, one of which is taught to read in Navajo and the other of which learns to read in English, and after one year let's decide which group reads better. What we managed to persuade them is that you don't do something like that until at least you are sure what it means to teach people to read in Navajo. And we made it reasonably clear that if they want results coming out of that, this has to be a long-term operation. And our first task is to find out what is the best way to teach Navajo children to read Navajo; then once we can do that well, we can say, "Now let's compare that with not doing it." But it's silly to try to compare a method that's made up over-night with some whole sets of methods that have had some thirty or forty years of experimentation and trial.

Well, we are doing a number of different things as part of our first year. Our first year's major aim was to plan how we go about things and to prepare the sort of information that we will need when we get into the problem seriously. One thing we've been doing -- and you might like to take a look at our third report and take one with you if you are interested -- is to start making a list of bibliographical items of various kinds that have been produced, in one form or another. We've included some things that are, in fact, reading materials, other things are just little books in Navajo, and other things are in English, but are relevant, and so on. We want to make sure that we know what exists, how we might use it, how good it is, how bad it is, etc. If at any time you have suggestions of things which you think we should add, we would appreciate either that you give us the full description of it, or just tell us where we might find the item, and we'll look for it and add it. We don't suggest for a moment that it is anywhere near complete. But it's a start, and we hope that people will run around saying, "Why did you leave out such and such?" And we'll say, "Good, now tell us about it, and we'll find it and put it in."

Now, for the next thing that we go on to -- and this is the main purpose for our meetings today and tomorrow -- is that the first consultant we brought in, Dick Venezky, who's done a lot of work in reading, was asked, "How do you go about preparing good materials in reading?" He kept on answering the question in different ways, but he kept coming up with one statement. And that was: "If you want to teach somebody to read, you want to know something about his language." If you want to teach a six-year-old to read, you want to know how a six-year-old talks and what he uses and what he doesn't use. That's more or less where we are starting off. Basically, the question we are going to be asking you to talk about -- as a main question, although you will have lots of other suggestions, I'm sure, to give us -- is how do we go about characterizing the speech of six-year-olds. And that will be the question we are most interested in now. You obviously will have a great deal to contribute and a great deal to suggest about other aspects of our study. And we will be very happy to hear them.

Now, perhaps, Paul, would you like to lead into that by talking about the sort of background for the sample?

MURPHY: The main problem that we're going to have to deal with at this time (in the project) is to start thinking about the language of the children. The actual writing of materials won't come up for some time yet. But when you do get around to writing materials, you have to worry about the method of presentation -- what your pedagogical orientation will be. We do have some ideas about that and that isn't really what we will be discussing at this conference. More, we will be concerned with the determination of aspects of the content of the materials. (That can be viewed as cultural insofar as it deals with what sort of things are of interest to Navajo children.) If you have any ideas about these things, please suggest them. But especially the linguistic side will be our concern.

Now when you approach the writing of materials, one of your concerns should be phoneme-grapheme correspondences. We are going to have sentences which we are going to analyze from the standpoint of frequency counts of phonemes and that sort of thing. And the results of this will also have implications for the introduction of graphemes into the materials. That won't be too great a problem, however. The computer simply sits there and counts them, I think. But there will be some problems with things like diacritical markings. There have been questions, a few times, whether it is really necessary to show such things as nasalization and tone in Navajo. Is the language redundant enough that a person could learn to read without them? There has been some experimentation, I think in Rough Rock, with leaving tone off. You might help us consider these things.

There is also the problem of vocabulary with Navajo children. What frequency do the words in the sample have? Availability would be another thing to think about. It is measured by such means as asking a child to tell you all the words he can think of dealing with -- oh, things in the house, like things that go along with the dinner table. Now the reason this is a problem is if you actually count the occurrence of these in speech, they might not occur too often, because we get around their use by pointing and ways like that. But yet, they are very basic words which probably should be included in the materials.

And the next thing would be structure. And here I think it would be smart, probably, not to get too "deep" in the transformational sense, but to stick fairly closely to a structural analysis.

Now how do we get the sample which we are going to analyze along these lines? When Dr. Venezky was here, he suggested that with twenty children and fifty to a hundred sentences from each child we could have a pretty good sample. (About 2,000 sentences.) There have been quite a few studies that have been done in English -- one by Strickland studied six grades. She had something like 14,000 sentences. So our 2,000 sentences for one grade would be fairly close to the kind of corpus that she had for that study. But if you have any thoughts about how many utterances we would have to have to be representative of the children's speech, we'd like them too. The students we would actually work with in gathering the sample would be of interest to us, too. We thought that probably Rock Point and perhaps Rough Rock would be good places to work. There are probably going to be questions about dialect -- which nobody seems to know too much about. Perhaps you would have some thoughts about that, too. We are also accepting any suggestions concerning techniques for gathering the sample. We have a wireless microphone that should be of great use. Perhaps one technique might be to put this on a child and send him out to play with other kids. We might get more speech that way than we would by setting up interviewer situations. The cultural implications of how you go about gathering a sample with little Navajos might be different from when you are dealing with little W.A.S.P.'s, though.

OK. Assuming that we have the data, then, we have to go about preparing it for analysis and then actually doing the analysis itself. Now we are fortunate in that Ozzie Werner has done a lot of work with putting Navajo in a form that will work in a computer. And so a transcription system is already in existence which we can use. And he has also trained a lot of native speakers of Navajo who can transcribe this. So hopefully we will be able to hire one of these people who have already been trained. Therefore, getting from the point where we have things on tape to where we have them on paper shouldn't be too much of a problem.

But then, when we do have things on paper, what do we do with them? We have to figure out what we mean by a lexical item (with all kinds of morphological complications making it hard to draw the line.) And what do we mean by an utterance -- that is, what is a sentence in Navajo? There will be times in natural speech when things will be left out -- as when one person is responding to another's question. Do we deal with all of these fragmentary sentences, or do we arbitrarily exclude some of them from our analysis? (From the standpoint of writing materials they are interesting because we would like for the materials to represent natural speech as much as possible. Particularly we want to see the kinds of things which people tend to leave out when they are responding to a question.) Then, once we have decided what we are going to mean by "word" and "sentence," we are going to have to put our data in the computer.

Now the actual programs that we are going to use are also open to question. Ozzie Werner has done a lot of work with various kinds of concordances. And these will be helpful when we take our items and see the various contexts that they appear in and we get some notions about the structural nature of the speech of six-year-old Navajos. But the actual type of concordance is unclear. There are various kinds. A backward concordance has been discussed a few times. You can see the piling on of various suffixes in the kind of concordance that spells words out backwards. Other types of analysis are possible. Some might not necessarily have to be done exclusively by the computer. The verb and verb morphology will definitely be a big problem for analysis. Ozzie suggests that various types of sentence connectives will require decisions as to how to deal with them.

The last thing I have here is follow-up. Regardless of the size of our corpus, and regardless of what we find out about vocabulary items, when we go to write materials, we are probably going to box ourselves in now and then. And it would be very convenient to use a word that hasn't appeared in the corpus. And so we will have to go back and find appropriate children and find out if they can use these items that perhaps just didn't happen to turn up in the sample. There will be certain mopping-up activities which will have to go on while we are writing materials. I think that is fairly sure.

So that's the problem pretty much. We have to keep the materials in mind while we are analyzing the data and then after we have the data analyzed, we are still going to have to go back and check on some things before they go into the materials.

December 4, AFTERNOON SESSION

HALE: You sound committed to the idea that what you should do is collect a sample and analyze it in various ways. I wonder if that is irretrievably the case. It occurs to me that if what you essentially want to do is teach people how to read using an alphabetic system, what you want to do is teach people the principles of alphabetic writing (which are of interest in themselves.) And it seems to me that one of the best ways that this could be done is actually to do this in a teaching situation rather than having a research project which generates a corpus that is submitted to an analysis using a set of procedures. (For then one wonders what procedures and what one does with the results.)

Why not look at it this way -- have a class in which you simply point out to the children what it means to have a writing system. You see a five-year-old kid is pretty smart and they like scientific challenges. And I think the idea of an alphabetic writing system is a very interesting challenge. You point out that essentially what we do is match up symbols (which we write down) with sounds, and that there is a relationship between the sounds and the movements which we make with the speech organs. Now there are some very obvious movements which the kids will very quickly begin to appreciate. If what you mean by "frequency" is something like "functional load," /m/ would come down way low. But it strikes me that if I were going to teach a bunch of kids how to read I would be very interested in exploring the possibility of doing it from this point of view -- /m/ is produced in such an obvious way -- and you can describe the way it is produced with the kids contributing to the effort by saying something like: "Yeah, I know. What you do is you close your lips and you hum." And they begin to develop a sort of system of vocabulary of articulatory phonetics. And they begin to actually explore the science of linguistics. Perhaps even the first day, I can just see, for example, one kid getting really excited about it all and saying "every time we hear the sound /a/ we use this letter 'a' to write it down. (You don't worry about tone yet. Eventually you teach them these contrasts as well, though.) So now you say, "Class, can you think of any words that have 'a' in them?" And you start getting the kids involved until eventually you get a stack of words that have 'a's in them. Then you start looking at these words and you say, "Look. Here's a word that begins with 'a' and here's one with 'a' in the middle, and here's one with 'a' at the end." Then you start pointing out that instead of having a word begin with 'a', you can also have it begin with something else. Figure out ways of getting the kids to begin to talk about articulatory phonetics. And even though there is no word 'ma' in Navajo (there is a stem, as in 'shimà') it doesn't matter at this point because what you really are interested in now is teaching the notion of an alphabetic writing system. So it doesn't matter if you have a lot of nonsense syllables. And you sort of build on this.

I found that this worked at least with one adult whom I worked with. He began to appreciate precisely the things that you want.

And you see the kids would be generating terminology to talk about this stuff. Five-year-old terminology for talking about positions of articulation. Like what do you do when you say a /t/? And you get them thinking consciously about the things you do when you pronounce a word. Eventually they will think of an appropriate term for voicing which will be absolutely perfect. Kids are pretty good at that. At least I think they would be -- I can't guarantee it, but it seems to me that this would have fantastic results. And not only that, but you would be teaching them what you want to teach them. You see you really don't want to teach them to read Navajo as much as you really want to teach them how to read. You could teach them to read Navajo by just doing it the Chinese way -- but we're teaching alphabetic writing systems.

[A considerable amount of discussion followed. Werner mentioned that it is often a problem when teachers lack the technical vocabulary to describe sounds, but he reasoned that if the vocabulary came from the children themselves, it would be perfectly appropriate to their level. It may be exciting to tell other children later that these terms were developed by children like you.]

SPOLSKY: This is very interesting but I don't quite see that the results of collecting a sample wouldn't be valuable. To do what you want to do requires an especially skilled teacher, and one of the things which will help them to be that is to give them a great deal of information. Also, the sort of thing which would come from this language sample would not only be valuable at the first stage, but also for advanced preparation of materials -- one of the main purposes of this research is an easy way to get permission to use something which you can be sure children will understand. At least the fact that something will be in the corpus stated as having a high frequency and a wide range will mean that there is no problem about putting that word in. The absence of something from the list will simply be a sign that you had better check first. The problem with using your {Hale's} approach is how do we generalize from that?

HALE: Presumably you start moving into the business of using stories that the kids themselves generate -- and presumably their peers will understand them.

[Discussion returned to the notion of children's terms for articulatory phonetics. Holm questioned the need for much technical sophistication on the part of the children. Hale argued that the child might as well have the tools to talk about sounds. In our own language we are usually not taught to have any more than a vague knowledge of sound production and we miss a great deal as we approach another language -- and that is what these children would eventually be doing.]

SPOLSKY: The second language they will be approaching does not have a particularly good writing system.

HALE: Therefore it is even more important that the children be able to talk about the flaws in the English orthography in some fairly precise terms. The Navajo orthography, you see, is very good.

HOLM: One of the problems that would have to be faced is that the teachers would not be linguistically sophisticated. The corpus might provide insights which would help them in their preparation and presentation. It might provide appropriate lexical items to have ready: it might not be necessary for the teacher to pull the examples off the top of her head.

SPOLSKY: That's true. Regardless of how incomplete the survey would be, it would help.

MURPHY: Also moving beyond just the phonological level, some previous structural knowledge on the part of the teachers would be of use to them.

WERNER: I don't feel that the sample idea and the Hale Proposal are mutually contradictory. They both deal with eliciting five-year-old Navajo speech.

[Spolsky suggested that the participants return to this topic later, and that now they turn their attention to the analysis of a sample. Holm presented some potentially problematic areas for consideration: 1) eliciting sentences, 2) transcription for the computer and its relationship to the decisions of the Orthography Conference done by the Center for Applied Linguistics, 3) phonemic vs. morphophonemic writing systems (what should be considered one or more words,) 4) false starts, fragmentary sentences, run-on sentences, etc. Werner explained some aspects of his computer transcription system. The group decided that it probably would be best to follow Young and Morgan if there were doubt about word division.]

[Werner presented some suggestions for the analysis which were inspired by his dissatisfaction with the superficial analysis used by the Strickland study of English. He felt that even an "impressionistic" inventory of transformations existing in child speech would be an improvement over surface structure centers.]

He suggested some possible candidates for the inventory: intransitives, transitives, double transitives, negation, yes and no questions, regular questions, relativization, subordinizations of simple and more exotic kinds, the use of various sentence connectives, inversions, indefinite forms of the verbs, etc.]

HALE: (In reference to Werner's list) Some of these are rules and some just facts about the language, and we have to keep the two separate. But there are some very obvious rules in Navajo which would be excellent for the study of acquisition of Navajo.

[Hale presented several examples which a hierarchical arrangement of noun phrases in relation to how they enter into a transformation analogous to the English active-passive transformation. Discussion to the effect that information regarding the stage of development at which children handle these distinctions would be of interest.]

MURPHY: I think it is important, however, to keep in mind that the purpose of this project is not necessarily to do a developmental study of the acquisition of Navajo syntax.

WERNER: Also, I think it is important to know what the children understand -- even if they don't actively control these structures. Probably some items that the children understand but do not use should be in the materials.

SPOLSKY: Well that is an interesting theoretical question and there are a lot of different opinions on it.

Holm led a discussion of lexical matters and then presented some actual taped material for the group to try to transcribe and analyze. It touched off considerable controversy as to normalization, word boundaries, depth of analysis, "enclitic stripping" and other points.

SPOLSKY: [to group.] Do you feel that it might be possible for us to get to the stage where we can state that six-year-old Navajo children tend to use a large number of a certain kind of sentence?

WERNER: Yes, if you want to be very pragmatic about how you define the sentence types.

HALE: It seems to me that especially with only about 2,000 sentences in the total corpus it would be much more effective to find some way of determining "Does the child have X?"

YOUNG: You don't have to hit the kid with the interviews cold. [As was the case in the tapes under discussion.] You might figure a way to give him a chance to prepare something that might be more normal.

SPOLSKY: Yes, and it may be that excited talk is not very good for analysis -- however common it may be in the conversation of six-year-olds.

WERNER: [to Spolsky] Did you think any more about the use of child interviewers?

SPOLSKY: Yes, we are trying out your microphone at the University kindergarten and trying to get some ideas as to how naturally the kids will respond to that sort of situation.

HOLM: With these fragmentary answers to questions, do you give the child credit for a complete sentence?

HALE AND RIGSBY: No, you give him credit for the appropriate answer -- which in these cases is often a fragment.

WERNER: Then for purposes of analysis would it be best always to treat questions and answers together?

SPOLSKY: How free are we to select what to analyze from the whole sample? Do we have to analyze everything?

HALE: Remember as you consider the value of a corpus that there are millions of hours of tapes of children speaking English and you can sit listening for almost a year before you come up with anything that can contribute to a hypothesis. You don't have that sort of time. That's why people focus now on directed interviews. But you take the risk that you might be looking for the wrong thing.

MURPHY: Can't you get a gross structural impression from a brief corpus and then go on from there by the directed interview?

SPOLSKY: Yes, one must think of this as a continuous process where one is collecting, transcribing and analyzing all at the same time. And at a given point of time one says, "We have to stop now." (For some reason, like we have run out of time or money or both).

WERNER: How about the notion of ancillary eliciting?

HALE: That's a very good point. These sentences here seem very valuable to me, but the thing is that you have to have an awful lot of them to start getting an idea. Look at how we have sat and puzzled over them. That's going to be typical. And you see the size of the corpus simply multiplies that problem. We don't know whether that is two sentences or one -- there's not much agreement among us -- but it's possible, I think, to go back to the child and ask him to give some opinions about it. Ask him to edit what he has said. But that's very time-consuming, too.

JUNG: It certainly would be with five-year-olds.

HALE: And that's important.

WERNER: Maybe you have to select areas that can hold the children's attention, too. Like Navajo boys can talk for hours about cars.

SPOLSKY: Also, as we discussed before with Ozzie and Ken, some kids will be more verbal than others, and it will be convenient to work with them. Then, you have to try to find out how different they are from other children. But you would certainly need someone who could speak clearly.

WERNER: You should probably see how well they communicate with kids their own age, and how old the kids they play with are. (Maybe they play with older kids.)

MORGAN: It also depends on how many other children are in the family.

December 4, EVENING SESSION

SPOLSKY: I think I am seeing more and more that the collection of a corpus is very limited. Come to think of it, I remember having long arguments in linguistics classes about why you can't write a grammar from a corpus.

HALE: It depends on what you mean by a corpus. If you mean this sample, that's fine, because maybe something will crop up in this random corpus you get which you wouldn't have thought of asking about. But on the other hand, there are two kinds of corpuses: there's also the directly elicited one, and I think that might be more profitable. ... About this vocabulary thing -- wouldn't it be possible to go through this and cull out, say, the 1,000 words or so which you would sort of guess a six-year-old would know, and then take that list and check it?

SPOLSKY: I think that's the point of the familiarity study. I suspect somehow that those words have a different status in an individual child's vocabulary. ... You [Werner] said something before about having looked at Strickland and not liking it.

WERNER: Well, I offered the counter-suggestion that we should look at these sentence types.

SPOLSKY: I mean you didn't like the attempt at setting up a structural analysis.

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WERNER: I didn't quite see that the frame method that she used showed much about the interesting things like how kids put two sentences together to make up complex ones and this type of thing. I think hers would be a very pedestrian approach.

SPOLSKY: So you would suggest that we look through the first sample and see if these things occur and if they do we say, "Good." and if they don't we try to see how we can elicit them? And if we can't elicit them productively we finally say, "Can we test comprehension of them?"

WERNER: That's probably a very good way of doing it. And as you get more sophisticated at it you would probably need fewer and fewer kids.

SPOLSKY: But you run the chance of having a really atypical informant.

HALE: You could have them act out things with dolls to show comprehension.

SPOLSKY: How about imitation?

HALE: That's not working as well as once was thought.

[The group listened to more sentences.]

WERNER: Would it be worth while to use a speech stretcher on some of these things?

RIGSBY: It's really very important to have good quality tapes.

SPOLSKY: We also might go back and ask the child what he said.

BILLS: Would it help if the interviewer asked him to repeat on the spot when it was too fast?

SPOLSKY: It probably would work out that way after the interviewers tried to transcribe a few of these tapes.

[Some discussion of the quality of the interview. It was pointed out that the interviewer was untrained and not directed in any way. Discussion of the possibilities of using video tape equipment.]

December 5, 1970

SPOLSKY: In looking back over what was discussed yesterday, I believe that basically one of the key notions is that we are not working with a limited corpus. We will keep going back. It's not a closed sample at any stage. The way we would work is collect stuff, analyze it, and keep going back until we finally decide (for various reasons) to stop at a given stage.

Now there are a number of different areas that we'll be working on, I think, and vocabulary is a distinct problem from grammar. With vocabulary we could start with the four sets of measures -- which all have to be collected in different ways. Frequency (for whatever it's worth) would consist of saying how frequent things are in various types of samples. It should, I presume, be an interesting thing to come out with from the free running sample, if, for example, we were recording a full day or a full morning from a single child. So frequency is interesting in free conversation but not in elicited conversation. And all the way through this notion of range what we have to know is how many children an item occurs with. (For presumably if something occurs only with one child the frequency of that item in the total corpus should also be low. And presumably we should go back and check for that if something turns up in only one person's speech.) The availability studies would require us to decide what some fruitful domains might be and what might be some good ways to question about them. Under availability I would suspect that we would want to collect not just nouns, like the first study did, but we would also want to collect verbs. And that would require some sort of an appropriate eliciting technique. (You might give us some of your thoughts on this. Remember here the usual technique is to say "Tell me all the words you can think of in connection with X." The questions are 1) What are the X's, and 2) What are the ways to ask about them.) And the fourth is this familiarity thing. I looked up Jack Richards' paper where he reports on his study. People are requested^{to} rate (on a five point scale) how often they think they have come into contact with various words.

[Dr. Spolsky continued with a detailed explanation of the mechanics of the Richards study. Discussion followed touching upon problems related to getting any such subjective evaluations from children. The possibility of using pictures to see if children knew words was discussed. It was noted that one might expect cultural problems stemming from a lack of preparation to recognize pictorial representations of objects.]

HALE: How about using stickman figures? They might be closer to being culturally acceptable universally.

WERNER: That still might be too culture bound.

SPOLSKY: If you have to be careful about cultural problems with pictures maybe the best thing would be to get the children to draw the pictures.

HALE: That would take a long time.

HOLM: Often when a very young child draws a picture, he knows what's there, but he doesn't put in the sort of detail that would carry the message to another child.

SPOLSKY: Maybe we should get a twelve-year-old Navajo to draw them then. ... Now what about areas of interest?

BEGISHE: Girls are interested in getting water, making bread and other things that their mothers would do. Boys would be interested in getting water too and in cars.

YOUNG: I think that the activities connected with sheep herding would be of interest to all Navajo children.

MORGAN: Children like to ride horses.

WERNER: Remember that many of these things are traditional. How about the kids who grow up in Tuba City or Kayenta? Does sheep herding interest them too? Are there special topics of interest in these places? What fascinates these children? Toys? Heavy equipment? (You know earth moving equipment. That has fascination even for big kids like me.)

BILLS: Are there some activities that are not particularly everyday activities? Things that might be special activities?

[There was agreement that travel and rodeos might fit such a category.]

SPOLSKY: Probably these are good suggestions and what we should do is try to get kids to talk about some of them and see what else comes up. But unless we guess, many exciting areas might be left out.

WERNER: How about this. Anybody who has ever done any work with Navajos has always remarked about how important religion is in Navajo life. This must have some effect on children.

BEGISHE: Yes, that would be a good area. Children often play medicine man.

WERNER: My kids are talking a lot about Viet Nam.

AGGIE HOLM: Six-year-old Navajos tend usually to talk only about what is going on in their own families.

WERNER: Yes, I forgot the influence of T.V.

HOLM: How about the Navajo Police? That might interest the kids.

WERNER: And how about asking some pre-school children what they think of school? That might be very interesting.

SPOLSKY: General areas of interest like clothing, parts of the body, things around the house might work.

WERNER: How about favorite people -- like a grandfather. Find someone they feel close to and find out what they do together.

SPOLSKY: OK. Now let's turn our attention back to analyzing our vocabulary data. Are there any suggestions for some nice classification systems?

[There were not.]

YOUNG: Do they still take Reservation children on trips -- like to an airport to see inside of a plane? I think that at the end of such a trip there would be a golden opportunity to get some speech on that topic.

[The discussion returned to the grammatical analysis and Werner made suggestions regarding sentence connectives, sentence length, and sentence type.]

SPOLSKY: How do you elicit a paradigm from a six-year-old?

[No suggestions.]

WERNER: There is one thing that still worries me about finding out what a five (or six) year-old child's language is like and then fitting all the materials to this level. How do you make the material open-ended enough that you bring him up? Maybe knowing the developmental sequence would preclude going faster than the child would comprehend. Or would you worry about that? In the natural habitat children are exposed to everything at once.

SPOLSKY: That's true, but in the natural habitat, not all develop a high degree of mastery of their language. That's why you hear complaints from English teachers about people failing Freshman English and that sort of thing.

WERNER: But reading and writing are different from speaking.

HOLM: I wonder if eventually it might be possible to give the children, say, up to fifty per cent of their instruction in Navajo so that they begin to hear a lot of adult Navajo and not just speak and read 'kiddy-talk Navajo."

WERNER: That sounds good. But it is also true that in learning to read children should experience success, and perhaps with this familiar material (their own sort of speech) they could experience a greater degree of success. I don't know.

HOLM: Yes, and I think it is also true that in the early stages of learning to read, kids are having to worry about the mechanical aspects of the process. And I think it is true of most good reading programs that the language is much simpler than that which the kids could handle otherwise. Furthermore, I think it would be a mistake to have it otherwise. At the beginning stages.

WERNER: Put then you can go too far, like "Look. Look. Jane. Jane...."

SPOLSKY: Since we are all amateurs in the field of teaching reading, and these are no "experts" here to keep us "honest," could we talk a little bit about how you think we might go about teaching reading to Navajos? What ideas do you have on that?

BEGISHE: Some how I would start with the alphabet and make it fun to identify each sound and letter. I've seen it happen that when students get excited about the alphabet they begin to recognize short words on their own.

[Hale expressed agreement, and returned to his original proposal.]

SPOLSKY: How do you prepare teachers to be able to teach like that?

MURPHY: I wonder if kids would be faster to pick up notions of the articulatory process than the Colombian teachers I taught in the Peace Corps.

PENNY MURPHY: Yes, I think the Colombian kids were. They weren't as concerned with the beauties of orthography as the adults.

HOLM: We (at Rock Point) have done a little work with preparing children to scan lines from left to right, to recognize letters and so on. Then we taught the sound values of certain letters and made up words -- and used real ones too where they were available -- and found that the kids really did seem to show a tremendous amount of success when they felt they were getting somewhere and that it all made sense. The aids don't have to be tremendously sophisticated about the whole process as long as they know what the answers are on, say, the cards they show to the kids.

YOUNG: Going back into my own recollections of teaching my own daughter to read, she was very much interested in stories -- like most small children are -- and I suppose when she was two or two and a half, we were already reading little stories to her. Every night I had to sit down and read her some books. I got sick and tired of reading them because they were always the same books. This went on until she was perhaps three and a half years old and by that time she had memorized most of the stories. She would sit and tell them to herself. She wasn't really reading them, but there was a point of transition between "reading" these stories, which really she had memorized and associated with writing, to an actual ability to recognize those same words in other contexts. And before she entered school, she could read children's literature quite adequately. And when she was about five years old, we began to teach her how to write. She began to associate phonemic values with the letters she saw in words or parts of words. I wonder if this isn't part, at least, of a technique for teaching five or six year olds how to read. If you read to them, and even if they memorize the text, at least they begin to associate speech with its graphemic forms.

HOLM: But maybe because -- especially in the Navajo verb forms -- each letter sometimes makes such a great difference in the word, this might not work as well in Navajo.

YOUNG: But it seems to me that with Navajo, one of the processes that go on as one learns to be a rapid reader is that one begins to recognize certain prefixes and go directly to the end of the word to see what the real differences are. And it seems to me that this idea of memorizing a primer would aid in the establishment of this ability to spot familiar prefixes.

PENNY MURPHY: [to Young] Another point that you brought out in your example of your daughter learning to read is the importance of stories. I don't know how available appropriate ones are in Navajo, but they certainly should be.

HOLM: There are a lot of things that could be done. Rough Rock has a lot of teachers simply starting by naming familiar things in the classroom and putting signs on them with their names.

YOUNG: And you know it really is remarkable how a small child -- Providing he likes the story -- can stand to hear it every day.

WERNER: You know there is also the serious problem of once you have kids who can read Navajo, how do you keep up their interest? Is there enough advanced reading material for them?

SPOLSKY: Yes, but that's looking at it from the point of view that we are teaching children to read Navajo to read Navajo. But even if we look at it from the point of view that we are teaching them to read Navajo to learn to read English, still more materials must be developed. So presumably one of the things that one would get involved in would be the development of more advanced reading materials -- even without the thought that they are necessarily going to be used as part of the school sequence, although one hopes that they would be.

HALE: Returning to the problem of getting people prepared to teach the phonetics. I have had some experience in trying to teach and adult precisely that sort of thing, and it would seem to me that this is the type of study that adults get very excited about.

SPOLSKY: How long does it take?

HALE: I worked with one student and he learned in about two months. (I worked with him for eight months altogether, but then we left phonology after about two months.) He kept making new discoveries about inadequacies in the writing system. (I don't think that will be the case in Navajo, though.) He was really keen on this, I think. Of course, he was working full-time on it.

SPOLSKY: Would a summer program be enough?

HALE: I think so.

BEGISHE: I think that in Navajo the vowels are the most difficult things to teach. Even to Navajos.

[He went on to explain how he teaches the transcribers to handle the orthography of Navajo. He teaches first the simple vowels without tone and gradually adds tone, nasalization and other consonants.]

HALE: Essentially what you are teaching here is how to write any Navajo syllable. And that's good.

BEGISHE: This way we can make native speakers pretty proficient at transcription in about two weeks working four hours a day.

SPOLSKY: This is for the teachers, of course. Presumably whether the kids need to learn to write Navajo is another theoretical issue.

WERNER: That's right. But the teachers must be able to write well enough that they won't be embarrassed by a smart kid.

HALE: Right. And I think that along these same lines it is important that they get all the information about articulation, because that will help them to write well. Then they will be able to get into the classroom situation I described. You get the kids to start inventing articulatory terminology and so forth.

[Paul Platero described a method by which he gets children to learn to read by listing vowels and consonants in separate columns and indicating real and nonsense combinations for them to pronounce. Tone, nasalization, and vowel length are added gradually.]

HALE: It seems to me that you have the personnel to teach aides to teach. I don't see any problem.

PLATERO: The important thing here is that this method makes the learning experience somewhat of a game. The children like it.

[all agreed.]

WERNER: There is a woman in New Zealand who provides the children with the words (on cards) which they want to learn.

SPOLSKY: That's right. And they make up their own little books of stories with the words. You can even control this with the computer. You build in review, etc. It really gets down to individualizing. It seems (according to the reading experts) that at the early stages children need words to come back over and over again at the same time that they are acquiring the alphabetic principle. That way you have these things going side by side.

WERNER: Changing the subject just a little: when you teach these aides how to read, what reading materials are you going to give them? Robinson Crusoe? And what after that? How about reproductions of the old newspapers?

HALE: That's a great idea. There are some beautiful things there.

SPOLSKY: So we'll have to start a little literacy movement simply for the sake of training the teachers -- if for no other reason.

WERNER: Maybe there should be a talent search for people who are good at making up little stories. I'll bet there are still some Navajos who are quite good at that. Get them on tape to be transcribed by someone who is literate.

HALE: There must be a fair number of such people judging from the stuff in the old newspaper -- which I would assume was sent in by the Navajos themselves. There are some very exciting stories there as I recall.

WERNER: Are they available in the library here?

[There was a long discussion of how a whole set of the newspapers might be located and put on microfilm. Young suggested some other materials, for example The Story of the Present War which he and Morgan had done in the 40's. He said he had a copy. Aggie Holm suggested that we check at the Cultural Center at Fort Defiance.]

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[The conference closed with a discussion of possible sources of Navajo place names so that a map of the Reservation could be drawn using Navajo names exclusively.]